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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,553	09/27/2001	Stephen Jensen	7836/83303	4623

7590 10/04/2002

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EXAMINER

PATEL, ISHWARBHAI B

ART UNIT	PAPER NUMBER
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2827

DATE MAILED: 10/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/966,553

Applicant(s)

JENSEN, STEPHEN

Examiner

Ishwar (I. B.) Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 16-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,10-15 and 31 is/are rejected.
- 7) ☒ Claim(s) 6,8 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of 1-15 and 31, in Paper No. 8 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5, 10-12, 14 and 15 are rejected under 35 U.S.C. 102(Katsunori) as being anticipated by Katsunori et al., Japanese Patent JP402076295A, hereafter Katsunori.

Regarding claims 1, 11 and 31, Katsunori discloses a circuit board adapted to suppress electromagnetic interference, the circuit board comprising:

an electrically conductive transmission layer defining a circuit pattern (signal pattern 2, see figure 1);

a ferrite powder containing medium spaced from the electrically conductive transmission layer (ferrite containing polymer paste with ferrite powder); and

an insulating layer, positioned between the transmission layer and the ferrite powder containing medium (a resin insulated layer 3, see figure 1).

Regarding claim 2, Katsunori further discloses plurality of non-contiguous spaced apart ferrite powder containing medium regions, see figure 1.

Regarding claim 3, Katsunori further discloses the ferrite powder containing medium is not connected to an electrically conductive material, see figure 1.

Regarding claim 5, Katsunori further discloses the ferrite powder containing medium comprises an epoxy.

Regarding claims 10 and 12, Katsunori further discloses a captivating layer that maintains the ferrite powder-containing layer on the circuit board, (resin insulated layer 5, see figure 1).

Regarding claim 14, Katsunori discloses a polymer paste, which is inherently an adhesive material.

Regarding claim 15, Katsunori further discloses a resin-insulated material, which is a plastic material.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 4, 7, 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Katsunori et al., Japanese Patent JP402076295A, hereafter Katsunori, as applied to claim 1-3, 5, 10-12 above.

Regarding claim 4, though Katsunori does not explicitly disclose the ferrite powder containing medium as a paint, the paste may be in the form of paint depending upon the proportion of the solvent used and will depend upon the method of applying the ferrite containing layer to the board. Therefore, it would have been obvious to one having ordinary skill in the art at time the invention was made to have the board of Katsunori with the ferrite containing medium in form of a paint in order to suitably apply the same to cover the traces for controlling EMI.

Regarding claim 7, though Katsunori discloses the insulating layer as a layer just covering the pattern, the location of the insulating layer will depend upon the type of the circuit board and number of trace layers. And once the teaching is known, it can be used in any specific configuration. The crux of the invention of the prior art is to shield the conductive pattern. Therefore, it would have been obvious to one having ordinary skill in the art at time the invention was made to have the board of Katsunori in such a configuration to have the insulating layer itself a substrate layer in order to have shielding without additional insulating layer.

Regarding claim 13, the applicant is claiming the electromagnetic signal is an RF signal. Though, Katsunori does not explicitly disclose RF signal, EMI suppression and radiation suppression devices are used for high frequency signals creating more noise or interference or radiation hazard and RF signal is one of the signals requiring such suppression for reducing the disturbance in system or in the surrounding systems. Therefore, it would have been obvious to one having ordinary skill in the art at time the invention was made to have the signal of Katsunori, an RF signal, and the device is used for suppressing the unwanted interference / radiation / noise in order to have better performance of the system.

Allowable Subject Matter

5. Claims 6, 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments with respect to claims 1-5, 7 and 10-15 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Masahiro, Yumico et al., Masatake et al., Yoshinori disclose ferrite powder containing medium similar to applicant's claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ishwar (I. B.) Patel whose telephone number is (703) 305 2617. The examiner can normally be reached on M-F (6:30 - 4) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L Talbott can be reached on (703) 305 9883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3431 for regular communications and (703) 305 7724 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

ibp
September 28, 2002

Albert W. Paladini 9-30-02
ALBERT W. PALADINI
PRIMARY EXAMINER